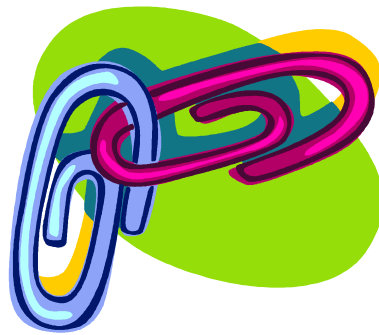


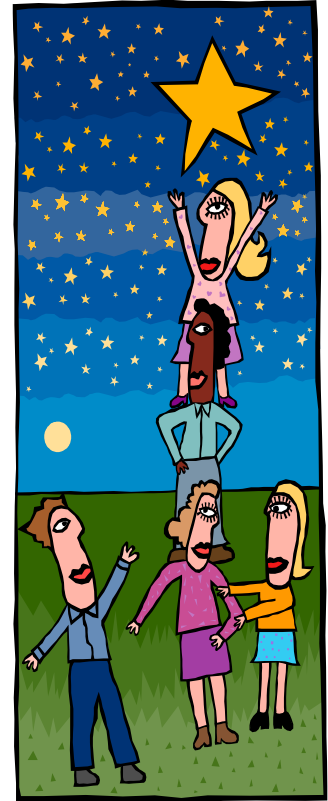
Differentiating Instruction for Gifted Learners



Linking Colleagues: A Guide for Teachers Created and Compiled by Gifted Support Staff

The surest path to high self esteem is to be successful at something one perceived would be difficult. Each time we steal a student's struggle, we steal the opportunity for them to build self confidence. They must learn to do hard things to feel good about themselves.

- Sylvia Rimm



*This handbook has been compiled to assist you
in planning for and working with
the gifted and talented students in your classroom.
You **CAN** make a difference in assisting
this segment of special needs students.*

THE DOS AND DON'TS OF INSTRUCTION: *What It Means To Teach Gifted Learners Well*

by Carol Ann Tomlinson, Ed.D, The University of Virginia

Some people suggest that gifted education is just sort of "fluffy" or enriching-gravy on the potatoes, perhaps, but not anything especially substantial or critical in the way of mental fare. Others propose that all gifted education is what's good for all students. Unfortunately, those two criticisms sometimes stem from observing classrooms where gifted learners are taught inappropriately.

So what does it mean to teach a highly able student well? Of course it will vary some with the age of the child, the subject, the learning style of the student-and possibly even the child's gender or culture. Certainly appropriate instruction for such learners varies for a child who comes to school rich with experiences vs. a child who is equally able but lacks richness of experience. And it will vary with a child who has immense potential vs. a peer with somewhat less capacity. Nonetheless, there are general indicators of appropriate curriculum and instruction for highly able students (in their areas of strength)-and general indicators of inappropriate curriculum and instruction for such learners.

Good Instruction for Gifted Learners

1) **Good curriculum and instruction for gifted learners begins with good curriculum and instruction.** It's difficult, if not impossible, to develop the talent of a highly able student with insipid curriculum and instruction. Like all students, gifted learners need learning experiences that are rich. That is, they need learning experiences that are organized by key concepts and principles of a discipline rather than by facts. They need content that is relevant to their lives, activities that cause them to process important ideas at a high level, and products that cause them to grapple with meaningful problems and pose defensible solutions. They need classrooms that are respectful to them, provide both structure and choice, and help them achieve more than they thought they could. These are needs shared by all learners, not just those who are gifted. But good instruction for gifted learners must begin there.

2) **Good teaching for gifted learners is paced in response to the student's individual needs.** Often, highly able students learn more quickly than others their age. As a result, they typically need a more rapid instructional pace than do many of their peers. Educators sometimes call that "acceleration," which makes the pace sound risky. For many gifted learners, however, it's the comfortable pace-like walking "quickly" suits someone with very long legs. It's only "fast" for someone with shorter legs. On the other hand, it's often the case that advanced learners need a slower pace of instruction than many other students their age, so they can achieve a depth or breadth of understanding needed to satisfy a big appetite for knowing.

3) **Good teaching for gifted learners happens at a higher "degree of difficulty" than for many students their age.** In the Olympics, the most accomplished divers perform dives that have a higher "degree of difficulty" than those performed by divers whose talents are not as advanced. A greater degree of difficulty calls on more skills-more refined skills-applied at a higher plane of sophistication. A high "degree of difficulty" for gifted learners in their talent areas implies that their content, processes and products should be more complex, more abstract, more open-ended, more multifaceted than would be appropriate for many peers. They should work with fuzzier problems, will often need less teacher-imposed structure, and (in comparison to the norm) should have to make greater leaps of insight and transfer than would be appropriate for many their age. Gifted learners may also (but not always) be able to function with a greater degree of independence than their peers.

4) **Good teaching for gifted learners requires an understanding of "supported risk."** Highly able learners often make very good grades with relative ease for along time in school. They see themselves (and often rightly so) as expected to make "As," get right answers, and lead the way. In other words, they succeed without "normal" encounters with failure. Then, when a teacher presents a high-challenge task, the student feels threatened. Not only has he or she likely not learned to study hard, take risks and strive, but the student's image is threatened as well. A good teacher of gifted students understands that dynamic, and thus invites, cajoles and insists on risk-but in a way that supports success. When a good gymnastics coach asks a talented young gymnast to learn a risky new move, the coach ensures that the young person has the requisite skills, then practices the move in harness for a time. Then the coach "spots" for the young athlete. Effective teachers of gifted learners do likewise.

Inappropriate Instruction for Gifted Learners

- 1) Instruction for gifted learners is inappropriate when it asks them to do things they already know how to do, and then to wait for others to learn how. Many advanced learners regularly complete assignments calling on materials, ideas and skills they have already mastered. Then they wait for peers to catch up, rather than being pre-assessed and assigned more advanced materials, ideas and skills when they demonstrate competency.
- 2) Instruction for gifted learners is inappropriate when it asks them to do "more of the same stuff faster." Reading more books that are too easy and doing more math problems that have ceased being a challenge are killers of motivation and interest.
- 3) Instruction for gifted learners is inappropriate when it cuts them loose from peers and the teacher for long periods of time. Asking a highly able student to sit at a desk in the back of the room and move through the math book alone ignores a child's need for affiliation, and overlooks the fact that a teacher should be a crucial factor in all children's learning. It also violates the importance of meaningful peer interaction in the learning process, as well as in the process of social and emotional development.
- 4) Instruction for gifted learners is inappropriate when it is structured around "filling time." Highly able students are often asked to go write a play, complete a puzzle, or do classroom chores because they have completed required tasks that take others longer. It would be difficult to defend such practices as a high-quality use of educational time.
- 5) Instruction for gifted learners is inappropriate when they spend substantial time in the role of tutor or "junior teacher." All students need to be colleagues for one another, giving a hand or clarifying procedures when needed. That's quite different from when advanced learners spend chunks of time on a regular basis teaching what they already know to students who are having difficulty. Some educators suggest that doesn't harm highly able learners because their test scores remain high. That begs the question of the extended learning these students might have garnered had the same amount of time been spent in pursuit of well-planned new ideas and skills.
- 6) Instruction for gifted learners is inappropriate when it is rooted in novel, "enriching" or piecemeal learning experiences. If a child were a very talented pianist, we would question the quality of her music teacher if the child regularly made toy pianos, read stories about peculiar happenings in the music world, and did word-search puzzles on the names of musicians. Rather, we would expect the student to work directly with the theory and performance of music in a variety of forms and at consistently escalating levels of complexity. We would expect the young pianist to be learning how a musician thinks and works, and to be developing a clear sense of her own movement toward expert-level performance in piano. Completing word-search puzzles, building musical instruments and reading about oddities in the lives of composers may be novel, may be "enriching," (and certainly seems lacking in coherent scope and sequence, and therefore sounds piecemeal). But those things will not foster high-level talent development in music. The same hold true for math, history, science, and so on.

It's Actually Simple-In Theory

What it takes to teach gifted learners well is actually a little common sense. It begins with the premise that each child should come to school to stretch and grow daily. It includes the expectation that the measure of progress and growth is competition with oneself rather than competition against others. It resides in the notion that educators understand key concepts, principles and skills of subject domains, and present those in ways that cause highly able students to wonder and grasp, and extend their reach. And it envisions schooling as an escalator on which students continually progress, rather than a series of stairs, with landings on which advanced learners consistently wait.

It's not so hard to articulate. It's fiendishly difficult to achieve in schools where standardization is the norm, and where teachers are supported in being recipe followers, rather than flexible and reflective artisans. In schools where responsive instruction is a carefully supported indicator of professional growth, the capacity to extend even the most capable mind is a benchmark of success.

TEACHER BEHAVIORS THAT SUPPORT GIFTED LEARNERS

- Participate in staff development activities concerning gifted education
- Practice curriculum compacting
- Provide enrichment opportunities on an ongoing basis
- Provide differentiated activities for identified gifted students as much as possible
- Plan with other Project Arrow teachers regarding curriculum and instruction of gifted students
- Facilitate peer interaction among identified gifted students

*“It may surprise you to find that
in a class that has a range of
abilities (and which class doesn’t?),
it is the MOST able, rather than
the least able, who will learn
less new material than
any other group.”*

Susan Winebrenner

Who is the Gifted Child?



They aren't always easy to identify...

BRIGHT CHILD

Knows the answer
Is interested
Is attentive
Has good ideas
Works hard
Answers the question
Top group
Listens with interest
Learns with ease
6-8 repetitions for mastery
Understands ideas
Enjoys peers
Grasps the meaning
Completes assignments
Is receptive
Copies accurately
Enjoys school
Absorbs information
Technician
Good memorizer
Enjoys straightforward,
 sequential presentation
Is alert
Is pleased with own learning

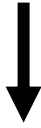
GIFTED LEARNER

Asks the questions
Is highly curious
Is mentally involved
Has wild and silly ideas
Plays around, yet tests well
Discusses in details, elaborates
Beyond the group
Shows strong feelings, opinions
Already knows
1-2 repetitions for mastery
Constructs abstractions
Prefers adults
Draws inferences
Initiates projects
Is intense
Creates a new design
Enjoys learning
Manipulates information
Inventor
Good guesser
Thrives on complexity

Is keenly observant
Is highly self-critical

Gifted Students

BEHAVIORS



NEEDS



Highly verbal, prodigious memory Very “quick” in learning Messy, careless work	Little routine or drill Compacting
Highly, endlessly curious “Tunnel vision” or flight	Options Time to explore
Operates at higher level of thinking than others of same chronological age	Impatient with details Loves problem solving options
Advanced sense of humor	To share it and be appreciated for it
Sensitive to fairness, justice, moral issues and dilemmas Skeptical, critical, judgmental, highly emotional; may cry easily	To be taken seriously by adults regarding this issue
Perfectionist; afraid to fail Work incomplete; deadlines missed	Opportunities to struggle and learn new material and skills; to set and attain realistic goals
Creative, takes risks; Non-conforming; daydreams	Tolerance of the creative process; guidance in appropriate behaviors
Energetic, assertive, persistent	Numerous options and choices at challenge level
May prefer to work alone or with one other person	Absence of pressure to be “normal” or social
Intolerant of others; unsure of peer relationships; clowning or withdrawal for social approval	Acceptance of people as they are; acceptance of own superior intellect

The ***Harrison Observation Student Form*** was developed to help you recognize students with outstanding potential who may be gifted. Some of the scale behaviors are listed below.

It is important to note that these behaviors capture both “teacher pleasing” and “non-teacher pleasing” behaviors because gifted children are not always “teacher pleasers.”

Do you teach someone who...

Learns Easily

Is eager to learn
Has lots of information
Retains and retrieves information
Carries out complex instructions with ease
Completes assignments ahead of others
(gets A's without effort)
Shows strong memory quick recall
Uses complex language & math symbol systems
Prefers work with more complexity
Refuses and becomes impatient with tedious
and repetitious work
Appears bored with or rushes through “easy” work
Corrects the teacher and students in class
Does not show work, only answers

Shows Advanced Skills

Reads and comprehends on an advanced level
(may be seen in listening comprehension)
Tells or reproduces stories and events with detail
Has a large vocabulary. Uses descriptive language,
similes, puns
Makes up songs, stories, and rhymes
Spends free time absorbed in books (may read when
supposed to do other things)
Seeks non-fiction as well as fiction
Generates many writing ideas and products
Understands advanced number concepts
Manipulates situations for specific purposes
Carries on conversations related to academic topics
Challenges teacher to go further in depth and complexity
Communicates well with symbols (art, design, music or dance)
Masters and shows high level thinking in a specific content area
Uses numbers and math skills in meaningful real world ways.
Understands the meaning and use of maps, diagrams, and graphs

Displays Curiosity & Creativity

Questions, explores, experiments
Asks unusual, provocative questions
Is curious (asks how, why, what if?)
Tries to discover the how and why of things
Puts unrelated ideas and materials together
in new and different ways
Enjoys doing things in new ways
Offers unique responses
Has an active imagination (likes to pretend)
Assumes another persona during activities
or conversations
Has trouble distinguishing fact from fiction
Does not follow or wait for directions
(makes own rules)
Refuses to follow rules unless they see “why”
Is seen as a “deviant” or non-conformist
Develops and tells elaborate stories

Has Strong Interests

Is able to lose self in something of interest
Demonstrates unusual or advanced interests
Keeps extensive collections
Is considered an “expert” in a particular topic
(may seem domineering)
Checks out books on particular topics
Chooses to become involved when
area of interest is addressed
Has interest in areas outside typical school
curriculum
Leads discussions back to one topic of interest
Resists transition moving onto a new topic
of study

Excerpts taken from Harrison Observation Student Form

TEACHER JUDGEMENT OF STUDENT CHARACTERISTICS

A REVISION OF THE SCALES FOR RATING THE BEHAVIORAL CHARACTERISTICS OF SUPERIOR STUDENTS

Joseph S. Renzulli, Linda H. Smith, Alan J. White, Carolyn M. Callahan, Robert K. Hartman, Karen L. Westberg

Directions: Please complete the following rating scale on each of your top 25% (quarter) of your students. Please use formal and informal assessments, reading and math indicators and behavioral characteristics as a guide to determining the group of students who should be considered.

The rating form below contains items that are designed to obtain teachers' estimates of student characteristics in the areas of learning, motivation, and creativity. The ratings for each item should reflect the frequency to which you have observed each characteristic.

We understand that some of the items are not easily discerned for primary students (i.e. Learning Characteristics-- # 5, 7, 9 & 12). In these instances, we ask that you give the students the benefit of the doubt. Strict confidentiality will be maintained on all students and teachers who complete this rating form. Your assistance in completing this rating form is greatly appreciated!

Instructions: Please read each item on the reverse of this sheet and **circle** the number that corresponds with the frequency to which you have observed each behavior.

Note: Each item should be read with the beginning phrase, **The student demonstrates...** The words that correspond to the three scale values are:

Never	Very Rarely	Rarely	Occasionally	Frequently	Always
1	2	3	4	5	6

Student's Name _____
Last First Grade

This Scale was completed by _____ Date _____

LEARNING CHARACTERISTICS

~

Total Pts. _____

The student demonstrates...

- | | | | | | | |
|--|---|---|---|---|---|---|
| 1. advanced vocabulary for his or her age or grade level. | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. the ability to make generalizations about events, people, and things. | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. a large storehouse of information about a specific topic. | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. the ability to grasp underlying principles. | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. interest in many "adult" topics, such as religion, politics, race and ethics. | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. insight into cause and effect relationships. | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. an understanding of complicated material through analytical reasoning ability. | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. a large storehouse of information about a variety of topics. | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. the ability to deal with abstractions. | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. recall of factual information. | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. keen and insightful observations. | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. the ability to state and define goals and priorities of others even when
they are not the same as his or her own. | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. the ability to transfer learnings from one situation to another. | 1 | 2 | 3 | 4 | 5 | 6 |

CREATIVITY CHARACTERISTICS ~**Total Pts.** _____

- | | | | | | | |
|---|---|---|---|---|---|---|
| 14. imaginative thinking ability. | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. a sense of humor. | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. the ability to come up with unusual, unique, or clever responses. | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. sensitivity to beauty and the aesthetic characteristics of things. | 1 | 2 | 3 | 4 | 5 | 6 |
| 18. an adventurous spirit or a willingness to take risks. | 1 | 2 | 3 | 4 | 5 | 6 |
| 19. the ability to generate a large number of ideas or solutions to problems
or questions. | 1 | 2 | 3 | 4 | 5 | 6 |
| 20. a tendency to see humor in situations that may not appear to be humorous
to others. | 1 | 2 | 3 | 4 | 5 | 6 |
| 21. the ability to adapt, improve, or modify objects or ideas. | 1 | 2 | 3 | 4 | 5 | 6 |
| 22. the ability to generate ideas that fall into different categories. | 1 | 2 | 3 | 4 | 5 | 6 |
| 23. intellectual playfulness, willingness to fantasize and manipulate ideas. | 1 | 2 | 3 | 4 | 5 | 6 |
| 24. a non-conforming attitude, does not fear being different. | 1 | 2 | 3 | 4 | 5 | 6 |

MOTIVATION CHARACTERISTICS ~**Total Pts.** _____

- | | | | | | | |
|--|---|---|---|---|---|---|
| 25. the ability to concentrate intently on a topic for a long period of time. | 1 | 2 | 3 | 4 | 5 | 6 |
| 26. behavior that requires little direction from teachers. | 1 | 2 | 3 | 4 | 5 | 6 |
| 27. sustained interest in certain topics or problems. | 1 | 2 | 3 | 4 | 5 | 6 |
| 28. tenacity for finding out information on topics of interest. | 1 | 2 | 3 | 4 | 5 | 6 |
| 29. persistent work on tasks even when setbacks occur. | 1 | 2 | 3 | 4 | 5 | 6 |
| 30. a preference for situations in which he or she can take personal responsibility
for the outcomes of his or her efforts. | 1 | 2 | 3 | 4 | 5 | 6 |
| 31. follow-through behavior when interested in a topic or problem. | 1 | 2 | 3 | 4 | 5 | 6 |
| 32. intense involvement in certain topics or problems. | 1 | 2 | 3 | 4 | 5 | 6 |
| 33. a commitment to long term projects when interested in a topic. | 1 | 2 | 3 | 4 | 5 | 6 |
| 34. persistence when pursuing goals. | 1 | 2 | 3 | 4 | 5 | 6 |
| 35. little need for external motivation to follow through in work that is
initially exciting. | 1 | 2 | 3 | 4 | 5 | 6 |

HOW GIFTED STUDENTS LEARN

1. More quickly than age peers; need compacting
2. Most difficult first, contracts, etc.
3. Opportunities to demonstrate prior knowledge
4. Do alternate activities instead of grade level work
5. Longer time blocks for in-depth learning
6. Incorporate their passionate interests
7. Independently with minimal structure
8. With teacher as guide from the side
9. For processes and research skills

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Choices-----choices-----choices-----choices----- choices-----

Characteristics of a Differentiated Class





Four characteristics shape teaching and learning in an effective differentiated classroom:

1. Instruction is concept focused and principle driven. All students have the opportunity to explore and apply the key concepts of the subject being studied. All students come to understand the key principles on which the study is based. Such instruction enables struggling learners to grasp and use powerful ideas and, at the same time, encourages advanced learners to expand their understanding and application of the key concepts and principles. Such instruction stresses understanding or sense-making rather than retention and regurgitation of fragmented bits of information. Concept-based and principle-driven instruction invites teachers to provide varied learning options. A "coverage-based" curriculum may cause a teacher to feel compelled to see that all students do the same work. In the former, all students have the opportunity to explore meaningful ideas through a variety of avenues and approaches.
2. On-going assessment of student readiness and growth are built into the curriculum. Teachers do not assume that all students need a given task or segment of study, but continuously assess student readiness and interest, providing support when students need additional instruction and guidance, and extending student exploration when indications are that a student or group of students is ready to move ahead.
3. Flexible grouping is consistently used. In a differentiated class, students work in many patterns. Sometimes they work alone, sometimes in pairs, sometimes in groups. Sometimes tasks are readiness-based, sometimes interest-based, sometimes constructed to match learning style, and sometimes a combination of readiness, interest, and learning style. In a differentiated classroom, whole-group instruction may also be used for introducing new ideas, when planning, and for sharing learning outcomes.
4. Students are active explorers. Teachers guide the exploration. Because varied activities often occur simultaneously in a differentiated classroom, the teacher works more as a guide or facilitator of learning than as a dispenser of information. As in a large family, students must learn to be responsible for their own work. Not only does such student-centeredness give students more ownership of their learning, but it also facilitates the important adolescent learning goal of growing independence in thought, planning, and evaluation. Implicit in such instruction is (1) goal-setting shared by teacher and student based on student readiness, interest, and learning profile, and (2) assessment predicated on student growth and goal attainment.





DIFFERENTIATION

Differentiating instruction requires making adaptations in the classroom so that students have multiple options for taking in information, making sense of ideas and expressing what they learn. Adaptations can be made in the following areas: **CONTENT** (what are they learning), **PROCESS** (how are they learning this), **PRODUCT** (how are they showing you what they learned).





Differentiating CONTENT:

-  Curriculum compacting
-  Using varied text and resource materials
-  Implementing learning contracts
-  Using peer/adult mentors

Differentiating PROCESS:

-  Interactive journals
-  Alternative questioning techniques
-  Alternative instructional strategies
-  Tiered assignments

Differentiating PRODUCT:

-  Modify depth of product
-  Modify complexity (more global issues)
-  Allow for independence
-  Use alternative product

DIFFERENTIATING CONTENT, PROCESS, AND PRODUCT

Gifted students often learn at a fast pace and are able to grasp basic concepts easily. There is often no need for them to be involved in a review, extended practice, or re-clarification of a concept.

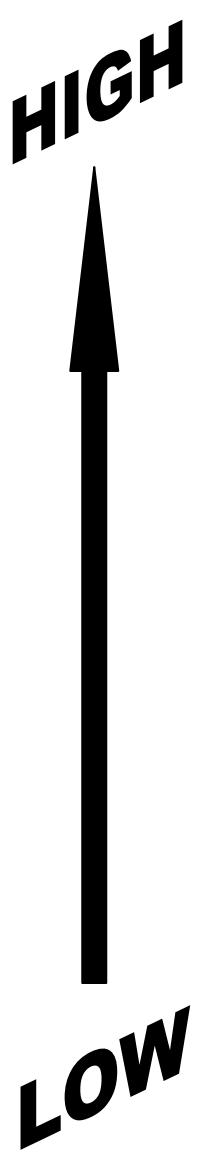
Curriculum Compacting is a flexible, research-supported instructional technique that enables high ability students to skip work they already know and substitute more challenging content.

Eight Steps for Implementing Curriculum Compacting

1. Identify the objectives in a given subject area.
2. Find appropriate pretests.
3. Identify students who should be pre-tested.
4. Pretest students to determine their mastery level of the chosen objectives.
5. Eliminate instructional time for students who show mastery of the objectives.
6. Streamline instruction of those objectives students have not yet mastered but are capable of mastering more quickly than classmates.
7. Offer *challenging* alternatives for time provided by compacting.
8. Keep records of this process and the instructional options available to “compacted” students.

*Adapted from Curriculum Compacting
Reis, Burns, Renzulli 1992*

In most elementary classrooms, students spend a great deal of time working in the cognitive or thinking domain. The **Bloom's Taxonomy of Educational Objectives**, a commonly used model in educational planning, outlines the hierarchy of cognitive processes.



Cognitive Level	Definition	Trigger Words	Products
Synthesis	Re-form individual parts to make a new whole	Compose ~ Design ~ Invent ~ Create ~ Hypothesize ~ Construct ~ Forecast ~ Rearrange Parts~	Lesson plan ~ Song ~ Poem ~ Story ~ Advertisement ~ Invention ~ Other Creative Products
Evaluation	Judge value of something vis-a-vis criteria. Support judgment.	Judge ~ Evaluate ~ Give opinion ~ Give viewpoint ~ Prioritize~ Critique ~ Recommend	Decision ~ Vedit ~ Rating ~ Grades ~ Editorial ~ Debate ~ Critique ~ Defense ~ Judgment
Analysis	Understand how parts relate to a whole. Understand structure and motive. Note fallacies.	Investigate~ Solve ~ Classify ~ Contrast Compare ~ Categorize	Survey ~ Plan ~ Questionnaire ~ Solution to problem or mystery ~ Report ~ Prospectus
Application	Transfer knowledge learned in one situation to another.	Demonstrate ~ Use guides, maps, charts, etc. ~ Build ~ Cook	Recipe ~ Model ~ Artwork ~ Demonstration ~ Craft
Comprehension	Demonstrate basic understanding of concepts and curriculum. Translate into other words.	Restate in own words ~ Translate ~ Give examples ~ Explain ~ Edit ~ Summarize~ ~ Show symbols	Drawing ~ Diagram~ Response to question~ Revision ~ Translation
Knowledge	Ability to remember something previously learned.	Tell ~ Recite ~ List ~ Memorize ~ Remember ~Define~ Locate	Workbook Pages ~ Quiz or Test ~ Skill work ~ Vocabulary ~ Facts in isolation

Adaptation from "Bloom's Taxonomy" from TAXONOMY OF EDUCATIONAL OBJECTIVES book 1 by Benjamin S. Bloom. Copyright 1956 by Longman Inc. Copyright renewed 1984 by Benjamin S. Bloom and David R. Krathwohl. Reprinted by permission of Addison-Wesley Educational Publishers, Inc. in *Teaching Gifted Kids in the Regular Classroom* by Susan Winebrenner, copyright 2001. Free Spirit Publishing Inc., Minneapolis, MN : 800/735-7323; www.freespirit.com This page may be photocopied for individual/classroom use only.

***Differentiating product allows for more choices in working with
gifted student's modalities.***

Knowledge: Remember It!

Remember previously learned information.

Define basic terms.

Recall specific facts.

***Comprehension activities at the Knowledge level ask students to...
recall information, make lists, label maps , memorize facts, and answer
right/wrong questions.***

SAMPLE PRODUCTS AND ACTIVITIES AT THE KNOWLEDGE LEVEL

fill-in-the blank worksheet
Pre-made, labeled map
fact file
true/false quizzes
multiple choice worksheets
list of story elements

words/definitions
spelling list
labeled diagram
study cards
list of writing ideas
Concentration games

basic fact worksheet
matching worksheet
observation
discussions
spelling test
question/answer

Comprehension: Interpret It!

Understand the literal meaning of the information.

Interpret for later use.

Summarize in your own words.

***Classroom activities at the Comprehension level ask students to...
translate and interpret information so that they can use it.***

SAMPLE PRODUCTS AND ACTIVITIES AT THE COMPREHENSION LEVEL

blueprint
ESL activities
experiment notes
collage
music reading

study sheet
book summary
storytelling
dramatization
graph representations

pattern/instructions
questions from a chart
questions from a graph
speech overview
poetry interpretation

Application: Use It!

Apply previously learned information to new situations.
Choose the correct method for problem solving.
Experiment to predict outcomes.

*Classroom activities at the Application level ask students to...
solve problems by applying what they know to a new situation.*

SAMPLE PRODUCTS AND ACTIVITIES AT THE APPLICATION LEVEL

board game

chart

model construction

interview

computer simulation

diagram

collection

peer teaching

experiment

illustration

display

problem solving

Analysis: Take It Apart!

Break down information into understandable parts.
Recognize organizational structure.
Identify relationships and connections.

*Classroom activities at the Analysis level ask students to...
find patterns, ask questions, make inferences from observations, and
separate important from unimportant information.*

SAMPLE PRODUCTS AND ACTIVITIES AT THE ANALYSIS LEVEL

analysis of artwork

cause-effect

crossword puzzle

dissecting plants/animals

family tree

main idea-detail

mobile display

outlining

scientific observation

sentence diagramming

survey

word sorting

Synthesis: Create It!

Create something new by making connections with prior knowledge
Develop a hypothesis or prediction.
Plan a procedure or a design.

*Classroom activities at the Synthesis level ask students to...
design a plan, write an original communication, or create something new.*

SAMPLE PRODUCTS AND ACTIVITIES AT THE SYNTHESIS LEVEL

advertisement	design for a tool	journal narrative
art gallery	illustrated original story	design of a process
comic strip	extemporaneous speech	musical review
creative writing	group mural	poetry writing

Evaluation: Judge It!

Assess for accuracy.
Evaluate based on a specific set of criteria.
Compare with the highest known standards.

*Classroom activities at the Evaluation level ask students to...
make recommendations, assess value, critique ideas, make
choices, and support opinions.*

SAMPLE PRODUCTS AND ACTIVITIES AT THE EVALUATION LEVEL

letter to the editor	editorial	panel discussion
mock trial	self evaluations	revision
peer feedback	proofreading	product judging
art critiquing	item appraisal	criteria design

Adapted from Bloom's & Beyond by Kay Davidson and Tressa Decker

PROFESSIONAL ARTICLES ON GIFTED EDUCATION

- *An Introduction to Differentiation* by Carolyn Coil
- *What is Curriculum Compacting?* by Carolyn Coil

Vol. 1, No. 1

An Introduction to Differentiation

One of education's current "hot topics" is differentiating curriculum and instruction. When it is done well, this is one of the most effective ways to meet the needs of gifted and talented students, especially when those students spend the majority of their time in regular classrooms. Concurrently, it is an appropriate and useful approach to use in teaching all other children. In fact, once teachers begin differentiating for one group of students, the logical next step is to use differentiation strategies with the entire class.

While most educators agree that differentiating is a great idea in principle, it takes time, effort, practice and teacher training to make it a reality. It is not a quick fix for all of education's ills, nor is it a magic bullet to improve student achievement. It isn't even a set of specific strategies which must be used, though there are many strategies which will help make differentiation more practical and doable for classroom teachers. What differentiation is, then, is a way of looking at teaching with the premise of "one lesson, one activity doesn't fit everyone." We could say it is an "Information Age" approach to teaching rather than a "Factory Model" approach where everyone in a classroom always does exactly the same thing.

Teaching underpinned with the philosophy of differentiation gets teachers away from the "one size fits all" curriculum which really fits no one! It encourages students to become more responsible for their own learning and to recognize and use their own strengths, thereby helping them become lifelong learners.

It is easy to see the value of differentiated instruction, not only for gifted students, but as a teaching philosophy that helps teachers meet the needs of all students in their classrooms.

Conceptually, differentiated instruction originated in U.S. Public Law 91-230, the Federal Gifted Education law first passed in the early 1970's. The law states:

"These are children who require differentiated educational programs and/or services beyond those normally provided by regular school programs to realize their contribution to self and society."

Simply stated, differentiated instruction allows each student to learn at the depth, complexity and pace which is most beneficial to him. This approach to teaching reaches more students more effectively because the same basic curricular objectives are presented in a variety of ways that are meaningful to students with different learning styles and ability levels.

Differentiating curriculum and instruction provides students with a number of different options for learning including:

1. Different ways to take in the information
2. Differing amounts of time to complete work
3. Different levels of learning
4. Different assignments
5. Different means to assess what has been learned

Differentiation works best in a positive, encouraging classroom climate where students take responsibility and accept challenges to learn as much as they can! Differentiation doesn't happen automatically. In fact, learning how to plan and implement a differentiated curriculum takes training, effort, time and planning. Therefore, it takes motivation on the part of teachers and support from administrators in the form of having workshops (or sending teachers to workshops) where the concepts are introduced, and then providing release time for planning differentiated activities and units and supplying resources for implementation.

During the past three or four years, I have been very fortunate to train teachers to implement differentiation strategies in school districts throughout the United States and in several other parts of the world. While every group is different, I find some commonalities in terms of teachers' needs and responses when they are introduced to the concept of differentiation. Below are some suggestions:

1. Start small! Most teachers are overwhelmed by the number of possible strategies that can be used in a differentiated curriculum. I suggest that teachers begin with one or two strategies that fit best into what they are already doing and build from there.
2. Look for quality. The quality of work done by stronger students usually vastly improves in a differentiated classroom. This is most likely due to the fact that in a differentiated curriculum all children can be appropriately challenged. Happily, the quality of work done by struggling students usually improves as well.
3. Be aware of differences in learning styles. Differentiating curriculum should make teachers more aware of different learning styles and of the necessity for providing activities that fit both the way children learn and the appropriate level of their learning. Training in Learning Styles and Modalities, Brain-Based Learning and Multiple Intelligences provides a good background for differentiating curriculum.
4. Give students choices. Allow them to meet class requirements using the learning style and level of complexity that works best for them. While students like choices, these must be structured and monitored. Most students are not skilled enough as independent learners to make good choices without some structure. Additionally in an age of educational standards, choices must be designed to meet grade level standards and objectives.
5. Assess students before you teach. Most of the time assessment comes after a unit of study has been taught. In a differentiated curriculum it is best to find out what each student knows before you begin teaching and then plan learning activities accordingly.
6. Share successes and strategies with one another. This encourages all teachers to try new ways to differentiate. As more teachers in a school or school district are given training, time and encouragement, differentiation will become embedded in the way everyone works with children every day. While there are many experts in the field on the topic of differentiation, those with the best know-how for your situation could well be other teachers who work in your school every day.

Article written by Carolyn Coil taken from Carolyn Coil's E-magazine at www.carolyncoil.com/ezine21.htm

What Is Curriculum Compacting?

Curriculum compacting, developed by Dr. Joseph Renzulli and Linda Smith in 1978, is a differentiation strategy that is extremely beneficial to many gifted and high ability students. It is a process by which students are pre-assessed to determine what parts of the curriculum they have already mastered. When those areas of knowledge and skills are identified, these students are not required to complete the grade-level work. Instead, they work on alternate activities.

Curriculum compacting is a particularly important strategy for gifted and other high-ability students because they often come to school already knowing much of the grade level material. If these students are not challenged with new or different content, they waste time in school, do not learn important study skills, and do not grow as learners.

How Does Curriculum Compacting Work?

The first step in curriculum compacting is to identify the content, skill areas, standards, or benchmarks students have mastered. Compacting works particularly well in subjects or topics that are easily pre-tested such as math, spelling, grammar, vocabulary, and map skills. Questions in these subjects generally require one right answer. It is easy, therefore, to determine who knows the information and who does not.

In order to use curriculum compacting successfully, it is important to learn exactly what students know and what they need to learn. Pre-assessment determines knowledge mastery. Often a pre-assessment is a pretest, but it can also be a classroom observation, a short discussion with the student, a checklist of what the student knows, or even a brainstorming session.

Prior to the pre-assessment, the teacher determines the requirement for mastery. For example, mastery might be 90% or higher on a pretest or no more than one mistake in a writing sample. In a discussion, the teacher might use his or her professional judgment to decide if the student has mastered a certain topic.

After mastery is determined and documented, the next step is to choose alternate activities. Many teachers are concerned that they do not have appropriate alternate activities for high ability students. However, there are a multitude of resources. The teacher's editions of many textbooks suggest activities for advanced learners. Supplemental books that focus on activities to develop higher level thinking skills are excellent sources for alternate activities. Independent study in an area of interest is another possibility. Finally, the students themselves often have ideas of what they would like to do, how they would like to do it, and what product will result and represent the learning.

Do the alternate activities need to be in the same subject in which the student has compacted out? This is the teacher's decision. It may be that a math teacher wants students to work only on math compacting activities. Another teacher may decide that an activity in any subject area is appropriate. Either approach is acceptable. An essential factor to remember is that compacting activities should never be drill and practice worksheets covering skills and content the student already knows.

'Nuts and Bolts' of Compacting

Most teachers and parents like the strategy of curriculum compacting, but they are often unaware of what exactly occurs when this method is used. Below are practical ideas and suggestions for implementation.

- * The teacher meets with compacting students to decide with them on which alternate activity or activities they will work.
- * Some type of a time line is established, including when the students will meet with the teacher again and when the alternate activity is due. Compacting students can work independently or together, but it is important that they touch base with their teacher often.
- * The score that determines mastery is also the score that goes in the grade book. Students may receive extra points, if necessary, for compacting activities, but they should not be penalized with a lower grade if they work on a more challenging activity and do not get a high score. Gifted students are sometimes reluctant to work on alternate activities

because they think a possible lower score will negatively affect their grades. Steps must be taken to ensure that does not happen.

- * Sometimes compacting students from several classrooms are grouped together for an alternate activity and work with one of the grade level teachers while the rest of the students are working with other teachers at the same grade level. This functions well if all teachers at a grade level are targeting the same skills and content at the same time.
- * The most important rule for a compacting student is: "The one choice you never have is the choice to do nothing!" This is because learning time is so valuable. Therefore, it is important that it never be wasted.
- * Each student should be responsible for keeping his/her own compactor folder with the work in it. This is a good way for disorganized gifted students to learn skills in organization, and it gives them practice in taking responsibility for their own work and their own learning.
- * Parents need to discuss and show interest in their child's compactor activities. However, parents should not pressure their child to compact out of the grade-level work every time. Even gifted students have some academic weaknesses. Most gifted children compact out some of the time and usually in a specific subject. Very few compact out all of the time or in every subject.

What Does the Research Say?

Dr. Karen Rogers (2002) cites current studies that found 75-85% of average and above average elementary school students can pass subject pretests with 92-93% accuracy. The United States Department of Education's National Excellence Report (1993) found that gifted and talented elementary school students knew 35-50% of the entire curriculum in the five major subject areas at the very beginning of the school year. Renzulli and Reis (1992) directed a comprehensive national study that found elementary teachers could eliminate 40-50% of the regular curriculum for the top 10-15% of students with no negative effects on their achievement. Based on these studies, curriculum compacting is a viable strategy for the Education Plan.

Rogers (2002), however, cautions against too much compacting. When students compact in all academic areas, they can become stressed due to the fast pace of their learning. We need to remember that our gifted children, like all children, need time to reflect, think, relax their brains, and sometimes slow their pace. We want our gifted children to make significant academic gains. However, they must balance their social and emotional needs with their academic and intellectual needs. The "Pieces of Information" article in the next FGN newsletter will focus on that balance.

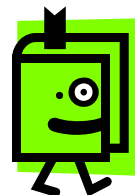
Resources

Pieces of Learning is one of the leading publishers of enrichment materials for and about gifted and talented children. Student activities in many of the Pieces of Learning resources are excellent to use as alternate activities for curriculum compacting. Visit online at www.piecesoflearning.com or call 1-800-729-5137 to request a free catalog.

In Australia, Hawker Brownlow Education is your best resource for a wide range of educational materials. Visit their website at www.hbe.com.au or call (03) 9555 1344 for more information.

Article written by Carolyn Coil taken from Carolyn Coil's E-magazine at www.carolyncoil.com/ezine21.htm

GLOSSARY OF TERMS



Curriculum Compacting:

Curriculum compacting is the process of compressing the required curriculum into a shorter time period so that students who master the basic content faster than others can use the time to do alternative activities.

It is a management device to help the teacher find out what students already know and not re-teach it to them; find out what the student's don't know and making sure they learn it; use the time that is saved for interesting, creative and challenging activities.

Cluster grouping:

This term is used when a group of gifted students are "clustered" or placed in the same classroom of a teacher who has been trained in curriculum compacting. Cluster numbers vary throughout the district, but the philosophy remains the same: "Grouping" students...4-7 is a cluster is ideal.

Differentiation:

The process of adapting the curriculum according to the ability level of the student is called differentiation. It is specifically geared to content, process, or product. Any change in either of these areas constitutes some type of adaptation.

Enrichment:

When enriching a student you are providing for the opportunity for a student to expand horizontally within a given activity. It can be an alternative activity, higher level questioning, studying something more in depth, etc.

Acceleration:

The term acceleration refers to the strategy of teaching content at a faster pace and usually a year ahead of the designated instructional grade level placement. Presently in the district we accelerate in Math beginning at the 3rd grade and at the sixth grade level we accelerate in Middle School in other academic areas.

Sample Forms for Classroom Use

_____ **Extension Activities ~ Grade** _____
(Subject)

(Unit Title)

Chapter .Section	Concept	Alternate Activity	Finished

+++++

Agreement for Working on Extension Activities:

- 1.
- 2.
- 3.

CONCEPTS ↓	Readiness					
	Below Level		At Level		Above Level	
<i>Independent Study</i>	<i>I. Select a Topic</i>	<i>II. State a Challenge</i>	<i>III. Design a Plan</i>	<i>IV. Gather Information</i>	<i>V. Organize Information</i>	<i>VI. Present the Findings</i>

CONCEPTS ↓	BASIC THINKING —————→ ABSTRACT THINKING					
	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
<i>Independent Study</i>	<i>I. Select a Topic</i>	<i>II. State a Challenge</i>	<i>III. Design a Plan</i>	<i>IV. Gather Information</i>	<i>V. Organize Information</i>	<i>VI. Present the Findings</i>

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Title of Unit / Subject

Extension Activities

	<p>Student Choice</p> <p><i>Think up an idea for a project that relates to this unit. Get it approved by your teacher.</i></p>	

Name: _____

Gifted Resources

Books

Teaching Gifted Kids in the Regular Classroom, Susan Winebrenner, Free Spirit Publishing, 1992.

How to Differentiate Instruction in Mixed-Ability Classrooms, Carol Ann Tomlinson. Association for Supervision and Curriculum Development, 2001.

Blooms and Beyond ~ Higher Level Questions and Activities for the Creative Classroom, Kay Davidson and Tressa Decker. Pieces of Learning, 2006.

Differentiation: Simplified, Realistic, and Effective – How to challenge Advanced Potential in Mixed-Ability Classrooms, Bertie Kingore, Ph.D. Professional Associates Publishing, 2004.

Activities and Assessments for the Differentiated Classroom, Carolyn Coil. Pieces of Learning, 2004.

Websites

www.nagc.com (*National Association for Gifted Children*)

www.iagcgifted (*Illinois Association for Gifted Children*)

www.hoagiesgifted.org

www.dupage.k12.il.us/teachers/gifted.html

www.bertiekingore.com

www.curriculumassociates.com/professional-development/topics/DiffInstruction/index.htm

www.carolyncoil.com